



AUG 20 1992

Reply to  
Attn. of: HW-104

MEMORANDUM

**SUBJECT:** Operation and Maintenance Inspection Report for Yakima Agricultural Research Laboratory; PRC Work Assignment Number 12-R-10047

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Background

PRC Environmental Management Inc. (PRC) under contract to EPA conducted an Operations and Maintenance (O&M) inspection at the Yakima Agricultural research Laboratory (YARL). The O&M inspection report and the Data Validation Report were submitted to EPA for review and approval.

Comments

PRC's conclusion that YARL has not fully established the degree of interconnection between the upper alluvial aquifer and the underlying aquifers is accurate. PRC's concern about the cause(s) of monthly variations in the direction of groundwater flow is justified. Contaminants may be moving off-site due to changes in flow induced by drawn down from adjacent wells.

**Well Purging and Environmental Parameters**

PRC notes that "[t]he sampling and analysis plan stipulates that a minimum of five well casing volumes will be purged before commencement of sampling. Only well, MW-G, had five well casing volumes purged prior to sampling. Three well casing volumes were purged from all other wells.

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## Laboratory Analyses

Site-related contaminants detected in downgradient wells include chloroform and tetrachloroethylene. These contaminants were detected at levels in the parts per billion range. These concentrations are significantly below the Proposed Subpart S action levels (55 FR 30798) and the Model Toxic Control Act Method A Cleanup Levels for ground water codified in WAC 173-340-720(2).

The laboratory analyses for volatile organic compounds (VOCs) is included in the report. However, the report provides analytical data for only four VOCs: methylene chloride, acetone, chloroform, and tetrachloroethene. The Quality Assurance Project Plan (QAPP) dated April 12, 1991, for this facility submitted by PRC stated that EPA method 8240 would be used to analyze VOCs in groundwater samples. The O&M inspection report does not provide the complete list of method 8240 compounds.

The QAPP stated that EPA method 8140 would be used for analyzing the groundwater samples for pesticides. The O&M inspection report as submitted to EPA does not provide complete method 8140 results. PRC subsequently provided a copy of the complete laboratory data package.

Notably missing in the data package are the analytical results for the field blank that PRC collected at YARL. The field blank is a component of the QAPP and according to the chain-of-custody form included in the O&M Inspection Report was sent to the laboratory for analyses.

## Compliance Evaluation

The O&M inspection report does not state whether or not the groundwater monitoring wells are labelled in accordance with WAC 173-160-500(4) as referenced by WAC 173-303-400(3)(c)(v). No such labelling or identification markings are visible in the photographs supplied with the inspection report.

## Conclusions

The O&M inspection report does not include the complete laboratory analyses for the groundwater sample collected by PRC. Previous reports prepared by the facility's consultant indicate low levels of mercury (0.26 - 0.32 ppb) are present in the groundwater. YARL's O&M techniques could be improved.

However, given the extremely low concentrations of hazardous waste constituents found in the soil and groundwater, the risk to human health is less than  $10^{-6}$ ; the risk to the environment is nil. The site has effectively demonstrated clean closure in compliance with 40 CFR §265.111 as reference by WAC 173-303-400(3)(b)(ix).

The absence of the laboratory analyses for the field blank may indicate that PRC did not adhere to the approved QAPP.